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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,403	03/18/2005	Lin Xu	60091.00386	4446

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EXAMINER

YOUNG, JANELLE N

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,403

Applicant(s)

XU ET AL.

Examiner

Janelle N. Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1-29 rejected under 35 U.S.C. 102(b) as being anticipated by Hwang et al. (European Patent 1392075).

As of claim 1, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS) (Abstract; Fig. 1; and Page 9, Para. 0044, lines 1-2), the method comprising the steps of:

transmitting a multicast service notification to a certain multicast group, said notification to inform of an upcoming multicast session (Page 6, Para. 0022, lines 1-2; Page 6, Para 0025, line 1-Page 7, Para. 0025, line3; Page 7, Para 0026; and Page 12, Para 0061),

receiving the multicast service notification in mobile stations belonging to said multicast group Page 6, Para 0022, lines 22-23 and Page 9, Para 0044),

in response to said receiving step, selecting a moment for a response to said multicast service notification in said mobile stations (Page 9, Para. 0044, 40-41),

sending a cell update message; which reads on claimed presence report, from at least one of said mobile stations at the response moment of said at least one mobile station (Page 6, Para 0024) ,

receiving the cell update message(s); which reads on claimed presence report(s), in a radio network controller located in a radio access network (Page 9, Para 0044; Page 10, Para 0050; and Page 13, Para 0063, lines 3-7),

setting up radio resources for multicast transmission in a cell of the cellular network, when the cell update message(s); which reads on claimed presence report(s), received in said cell meet(s) predetermined criteria (Table 5; Page 4, Para 0013; and Page 17-18, Para 0092), and

transmitting the multicast data using the radio resources set up for the multicast transmission (Table 5; Page 4, Para 0013; and Page 17-18, Para 0092).

As of claim 7, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), further including the step of checking the locations of said mobile stations in the cellular network (Page 6, Para 0023; Pages 10-11, Para 0051; and Page 12, Para 0057).

As of claim 8, Hwang et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), wherein the locations are checked at the routing area level, whereby the identities of the routing areas are obtained where the mobile stations are located (Page 8, Para 0039 & 0041).

As of claim 9, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein the transmitting of the multicast service notification includes transmitting said notification to all cells in the routing areas where the mobile stations are located.

As of claim 10, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), further comprising the step of checking the locations of at least some of said mobile stations at the cell level, whereby a set of cells are obtained containing mobile stations belonging to the multicast group.

As of claim 11, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein the transmitting of the multicast service notification includes transmitting said notification within all cells in the routing areas where the mobile stations are located, except within said set of cells.

As of claim 12, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein the setting up of the radio resources is performed for a cell when the number of presence reports received from the cell reaches a predetermined limit (Page 15-16, Para 0081 and Page 17, Para 0092, line 57- Page 18, Para 0092, line 8).

As of claim 13, Hwang et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), wherein said

limit is one (Page 18, Para 0094, lines 12-23 in correspondence with Page 17, Para 0092, line 57- Page 18, Para 0092, line 8).

As of claim 16, Hwang et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), further comprising the step of controlling and/or monitoring the number of members of the multicast group in a cell during the multicast session (Page 2, Para 0005 and Page 4, Para 0012).

As of claim 17, Hwang et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), further comprising a MAC with the step of authenticating at least one of the mobile stations prior to the transmitting of the multicast data (Fig. 17; Page 3, Table 1, lines 4-14 & 21-26; Page 8, Para 0036; Page 17, Para 0092, lines 50-53; and Page 18, Para 0095).

As of claim 18, Hwang et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), wherein the MAC has the authenticating step includes (1) inserting a challenge in the multicast service notification and (2) returning a response in the presence report (Table 1; Page 4, Para 0013; Page 17-18, Para 0092 and Page 18, Para 0094).

Regarding claim 19, see explanation as set forth regarding claim 1 (method claim) because the claimed system for performing multicast transmission in a cellular network would perform the method steps.

Regarding claim 20, see explanation as set forth regarding claim 12 (method claim) because the claimed system for performing multicast transmission in a cellular network would perform the method steps.

Regarding claim 21, see explanation as set forth regarding claim 13 (method claim) because the claimed system for performing multicast transmission in a cellular network would perform the method steps.

As of claim 22, Hwang et al. teaches a system for performing multicast transmission in a cellular network, further comprising termination means in said mobile stations, said termination means being adapted to MBMS Deactivation Message; which reads on claimed cancel the sending of the presence report, in response to the reception of a predetermined message (Page 13, Para 0063-0064 & 0067; Page 14-15, Para 0075; Page 14, Para 0070; Page 15, Para 0076-0077; and Page 17, Para 0089-0090) .

As of claim 23, Hwang et al. teaches a system for performing multicast transmission in a cellular network, wherein at least one of the mobile stations is adapted to MBMS Deactivation Message; which reads on claimed cancel the sending of the presence report, in response to receiving a presence report sent by another mobile station (Page 12, Para 0061; Page 12-13, Para 0062; Page 13, Para 0063-0064 & 0067; and Page 17, Para 0089-0090).

As of claim 24, Hwang et al. teaches a system for performing multicast transmission in a cellular network, wherein the predetermined message indicates that the radio resources have been established (Page 13-14, Para 0068).

Regarding claim 26, see explanation as set forth regarding claim 17 (method claim) because the claimed system for performing multicast transmission in a cellular network would perform the method steps.

Regarding claim 27, see explanation as set forth regarding claim 1 (method claim) because the claimed mobile station for performing multicast transmission for a cellular network would perform the method steps.

Regarding claim 28, see explanation as set forth regarding claim 23 (method claim) because the claimed mobile station for performing multicast transmission for a cellular network would perform the method steps.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-6, 14-15, 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang et al. (European Patent 1392075) as applied to claim 1 above, and further in view of Sato et al. (US Patent 20020106985).

As for claim 2, Hwang et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), radio bearer assignment notification, cancel/deactivating the sending of the presence report, and

MBMS Notifications. What Hwang et al. does not explicitly teach is time periods and time elapses in a MBMS.

However, Sato et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), wherein the response moment is specific to each of said mobile stations within a certain upcoming time period. (Fig. 20 and Page 1, Para 0004-0005 of Sato et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate time periods, random time, and time elapses techniques in order to generate smooth switching of base station from which information is received by a mobile set needed when the mobile set which is a radio terminal moves across service areas (in case of handoff) while receiving the multicast distribution of the information, as taught by Sato et al., in the multicast transmission in a cellular network of Hwang et al., because Hwang et al. already teaches radio resources.

The motivation of this combination would be the effect of the maximizing the efficiency of radio resources and improves system performance, as taught by Hwang et al. in Page 19, Para 0099, because the efficient use of radio resources is a very important factor, and the waste of radio resources affects the existing voice service and other services. This adds the repetitive operations, if the MBMS service was being served in the RNC. The incorporation of time periods, random time, and time elapses techniques in the multicast transmission in a cellular network would provide a multicast service providing system, method and, information distributing apparatus, radio terminal and radio base station by which radio resources can be effectively utilized, and, also, it

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becomes possible to properly perform multicast information distribution service via a radio section to radio terminals present within a service area. (Page 2, Para. 0020 of Sato et al.).

As of claim 3, Sato et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), further comprising the steps of:

informing at least some of said mobile stations of a presence report received in the radio access network (Page 1, Para 0004 of Sato et al.) and in response to said informing step, canceling the sending of the presence report in a mobile station waiting for its response moment to arrive (Page 10, Para 0133; Page 11-12, Para 0157; and Page 12, Para 0164 of Sato et al.).

As of claim 4, Sato et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein said informing step includes sending a radio bearer assignment notification to said mobile stations in response to the setting up step (Page 2, Para 0020-0021 and Page 12, Para 0164-0165 of Sato et al.).

As of claim 5, Sato et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein the selecting step includes selecting a random response moment within said upcoming time period (Page 1, Para 0004-0005; Page 8, Para 0106; and Page 16, Para 0217 of Sato et al.).

As of claim 6, Sato et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), further comprising the step of

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sending information on the length of the time period in the multicast service notification (Page 10, Para 0133 and Page 11, Para 0148 & 0153-0154 of Sato et al.).

As of claim 14, Sato et al. teaches a method for performing multicast transmission in a cellular network which includes mobile stations (MS), wherein the transmitting of the multicast service notification includes transmitting said notification periodically during said time period (Page 1, Para 0004; Page 3, Para 0026-0027; Page 11, Para 0153-0154; Page 12, Para 0165-0167; and Page 16, Para 0221 of Sato et al.).

As of claim 15, Sato et al. teaches a method for performing multicast transmission in a cellular network, which includes mobile stations (MS), further comprising the step of updating the length of the time period in the notifications transmitted periodically (Page 12, Para 0165-0167 and Page 16, Para 0217 of Sato et al.).

As of claim 25, Sato et al. teaches a system for performing multicast transmission in a cellular network, wherein said first means are adapted to select a random moment from within a given time period (Page 8, Para 0106 and Page 16, Para 0217 of Sato et al.).

As of claim 29, Sato et al. teaches a mobile station for performing multicast transmission for a cellular network, wherein the response means include timer means adapted to expire at the response moment (Page 8, Para 0109; Page 13, Para 0171; Page 15, Para 0207; and Page 16, Para 0219-0220 of Sato et al.).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 8:30 am through 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY
June 9, 2006


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SUPERVISORY PATENT EXAMINER